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NPIC/TSSG/DED-1592-69

MEMORANDUM FOR: Director, National Photographic Interpretation Center

SUBJECT : Proposed Contract with [] to Demonstrate the Utilization of the [] Graphics Terminal for an Advanced Graphics System

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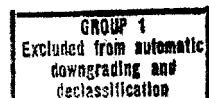
1. This memorandum requests approval for the commitment of funds for a contract. The specific request is stated in Paragraph 7.

2. Graphics are used extensively for providing information to the photo interpreter in assisting him to analyze imagery. Graphics are also used to clearly and conveniently convey the information in interpreted form to numerous users. However, line drawings, perspectives, etc. are time consuming and expensive to produce. They portray information about the object as seen from one view and they must be laboriously re-drawn to show another view. A graphics terminal recently marketed shows promise of producing graphics less expensively and offers more flexibility in communicating the graphic information.

3. There are numerous means of automating graphics production. One of the more advanced ways is to create an image on the screen of a cathode ray tube. With an appropriate system, the image thus created can be stored, recalled, manipulated and then printed out or recorded. It can be increased or decreased in size and it can have its shadow projected onto a reference plane. The latter procedure is particularly useful in identifying unidentified objects where the actual image is poor but the shadow of the object is clear on a photograph. While over a dozen [] Graphic Terminals have been sold to an impressive list of customers, each customer has his own particular problems that he is attempting to solve. Unfortunately, most of these problems are not common to NPIC. Therefore, the objective of the proposed contract is for [] to develop specific programs and techniques to permit NPIC to demonstrate the potential of this system for solving specialized graphics problems peculiar to NPIC. Some contractual effort will also be devoted to examining possible applications of the system to display and edit textual information. This project will result in four or more demonstrations at NSA using the [] Graphics Terminal at that location. Permission to use this equipment has been obtained from NSA (see attached memo). The demonstration can be given on more than one day to accommodate the schedules of different observers. The programs and techniques used for the display will be well documented so that they can readily

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be recalled and implemented again if NPIC procures a similar graphics system at a later date. A book containing photographs of the displayed images and textual procedures will also be furnished. A duplicate report will be furnished to NSA in exchange for the use of their equipment. The period of performance will be approximately 6 months.

4. An in-house study was initiated to examine the possibilities of automating graphics and reporting functions. Over twenty Government and industrial agencies were visited to obtain background information on graphics production. Of all the equipment observed, the [] Graphics Terminal, produced by [] is the most flexible system for portraying three dimensional objects without the assistance of an inordinate amount of computer support. The Graphics Terminal can function by itself or with the support of a central processor. Another reason for selecting [] is that four Government agencies have purchased graphics equipment produced by [] and programs that they have developed may be of potential use to NPIC in the future. Two of these agencies are in the Washington, D.C. area. The coordination with one of these agencies, NSA, has been effected as described in Paragraph 3. The approximate cost of this contract will be []. The use of NSA's facilities will be required to demonstrate the final results of this program. [] own equipment will be used for all work prior to this demonstration. The use of NSA's facilities has been arranged as described in Paragraph 3 and as confirmed by the attached memo. No other Government furnished equipment will be supplied to the Contractor.

5. The probability of success of this contract is very high. After evaluating the results of this contract, NPIC will assume a more advantageous position to determine whether the [] Graphics Terminal shows promise of future implementation. The purchase of fully functional [] Graphics Terminal equipment would cost approximately [] depending on the optional equipment finally selected for the system.

7. It is requested that the negotiation with [] be approved for a contract to conduct the program described at a cost not to exceed []

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[]
Chief, Technical Services & Support Group,
NPIC

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Attachments:

1. Memo C6/189/69 From Ch/C6, NSA to CIA/LO Dated 26 Mar 69
2. Memo CM-0325/69 From CIA Senior Representative, NSA to Ch/Signals Processing, Dated 20 Mar 69
3. Technical Proposal, WA 904-1 From []

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APPROVED: _____

ARTHUR C. LUNDAIL

Director

Date

National Photographic Interpretation Center

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